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ABSTRACT

A discussion of the public image and academic reputation of psychology covers three topics: general public skepticism of the field, the introductory psychology course, and undergraduate education in psychology. Public skepticism about psychology stems from: the nature of the field as one encompassing a diversity of viewpoints and theories; the input of untrained, "popular" psychologists; and the propensity of some otherwise reputable psychologists to sensationalize the field. While the first two problems are inherent to the discipline, the third is not, and therefore can and should be remedied. Federal funding for psychology research is adversely affected by such sensationalizing. While funding for science has been on the upswing in the 1980's, it was at a low ebb in the mid-1970's, a condition blamed largely on the projects of behavioral scientists. At that time, the National Science Foundation was distinguished as the agency receiving the largest number of Senator William Proxmire's "golden fleece" awards for waste in government. Most of these awards were based not on the quality of the research but on the way the projects were portrayed to the public. The introductory psychology course, like the field at large, must also resist the trend toward the overpopularized "fun and games" approach. Attention to undergraduate education in psychology is extremely important. Efforts should be made not only to relate psychology courses to the needs of today's students but to teach the courses in such a way that students leave with a high regard for the field. (LP)

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Psychology and the Golden Fleece

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Psychology and the Golden Fleece

My understanding is that this talk is to be informal and I assure you that I will be informal. I want to point out that before 1975 I was totally immersed in the field of psychology and my life was spent almost entirely with psychologists. In 1975 I went to the National Science Foundation in Washington, D.C. and in 1980 became Chancellor at the University of California, San Diego. I mention this because it is pleasant to be back among psychologists. There is a common language, a common intellectual heritage that makes a session strictly with psychologists relaxing and enjoyable.

I have three topics that I would like to address tonight. The first is concerned with the public image of psychology. The second relates to some of my views about the introductory psychology course. The third topic is a proposal regarding undergraduate education in psychology.

Let me start by noting that I took my first course in psychology--an introductory course--in the Fall of 1948 some 35 years ago. I had had no prior exposure to psychology before that course, but it was a peak experience for me. The course set the plan for a life-long career. Looking back over 35 years I am impressed by the advances that have occurred in psychology. Several years ago I published a paper in the American Psychologist entitled "Reflections on Psychology's Past and Concerns about it's Future." That paper discussed some of these advances and I am not going to review them this evening. Despite the remarkable intellectual and scientific progress that has occurred in recent

years, there remains a fundamental problem in the field, namely a pervasive skepticism about psychology by the general public. This skepticism is not just among those with a limited education or among those who are to the far right politically; rather the skepticism is broadly based in our society. Why this skepticism? I am not going to enumerate all the reasons but let me mention a few.

Obviously one reason is the nature of the field. We are dealing with human behavior and human consciousness. Everyone has an opinion and necessarily there will be strong differences of opinions. Because of this diversity of strongly held opinions there is going to be some degree of skepticism about psychology as distinct from fields like physics or chemistry. Another reason for skepticism is that psychology is a popular topic and attracts some strange people--often people who have had no training in psychology and yet make claims in the name of psychology: the graphologists, the astrologers, the palmists, the mystics, and some of the polygraph experts we hear so much about these days. These individuals make claims in the name of psychology and the public can't discriminate between them and those who are doing serious work in psychology.

The reasons I have mentioned so far are ones that we can't do much about. They are inherent to the field of psychology and in some ways contribute to making the field exciting and challenging. But there is yet another reason for public skepticism that is of our own doing and that we can and should do something about. I refer to a few of our colleagues, often well trained, some even leaders in the field, who in my judgement seek to sensationalize the field. These are individuals who make outrageous statements about psychology, often simply to attract public attention. These kinds of statements yield an

incredible amount of publicity--and not just articles in the National Enquirer. These articles come to the attention of the Congress. The Congress then wants to know if the research is being funded by a public agency, and if so why. Psychologists are their own worst enemies in this regard. When people on the fringes of psychology make outrageous claims, it is easy to defend the field. But when leaders in the field make irresponsible statements, a defence becomes difficult if not impossible. Federal funding for psychology and the funding base for the social sciences in general have been much influenced by this type of sensationalizing.

From the perspective of the Federal sector, particularly the Congress, it's important to project an image of psychology that emphasizes a scholarly discipline. A discipline that when consulted on issues of scientific fact or public policy responds in a way that emphasizes the constraints on the information that it is providing. At the other end of that continuum is an image of a discipline that's frivolous, popularized, and seeking to shock its audience; a discipline that when asked questions about policy issues provides definitive advice without raising questions or doubts. We are not served well by this latter image.

Now let me talk about these matters from my perspective at the National Science Foundation. I arrived at the National Science Foundation in the Summer of 1975. I was appointed as Deputy Director by President Ford. About nine months later the Director became Ford's Science Advisor and I became the Acting Director. When President Carter took office I became Director of the Foundation.

When I arrived in the Summer of 1975 funding for science was severely depressed. If one looked at the percent of the gross national product that

went for research and development (or other similar measures) funding for science was at an all-time low. Funding for science hit its peak about 1968. During President Nixon's period in office there was a steady decline and 1975 proved to be the low point. A great deal of effort was devoted to trying to increase funding in the late '70s. In recent years it's begun to climb at a pretty good rate. However, in 1975, science was under attack and funding for science was at a low ebb. Some members of the scientific community were pointing at the behavioral scientists suggesting that we were the cause; they had two principal reasons for singling us out. One was the Golden Fleece Awards and the other was MACOS. I'll describe MACOS in a minute, but let me talk first about the Golden Fleece.

The Golden Fleece was an "award" of Senator Proxmire to recognize waste in Government. If you examine the awards Senator Proxmire has given--that is, the Golden Fleece Awards that he has given outside of the area of the behavioral sciences--most are well deserved. He has targeted on abuses in funding and received a great deal of publicity, or at least he did in the '70s.

When I arrived in Washington, D.C. in 1975, the National Science Foundation was distinguished as the agency that had received the largest number of Golden Fleece Awards. Almost every NSF study in the behavioral and social sciences that Senator Proxmire called out for attention was worthwhile and involved fundamental research. Why then did he give these awards to NSF and why was he getting so much attention? Some awards were totally undeserved but a few involved research projects where the principle investigator was seeking publicity and Senator Proxmire was pleased to provide a response. I have in mind several studies in experimental social psychology; the research represented solid work that was defensible on scientific grounds. But what was

not defensible was the publicity investigators sought when presenting their research. For example, one such study involved young ladies walking across the street with different mini-skirt lengths; the dependent variable was how long a motorist would wait to honk their horn as a function of different conditions of stress. This investigator sought publicity for the study, and got publicity. The newspaper accounts identified the study as one funded by NSF and the Foundation received a Golden Fleece.

Most of the Golden Fleeces were not based on the quality of research but on the way it was portrayed to the public. The Congressional record from 1975 to 1977 (the oversight hearings for the National Science Foundation) provides interesting reading. A good part of it involves a running exchange between Senator Proxmire and myself on psychological research. NSF has not received a Golden Fleece since 1976 and in my opinion Senator Proxmire became a solid friend of the Foundation. My point is that if one can convey in some detail what the research is about, one can convince individuals like Senator Proxmire of the value of the work. But if we choose to be glib about things and generate news coverage that has shock value but doesn't accurately describe the research then we're going to get into trouble.

Following Proxmires lead several newspapers were paying $500 or more for any story they published related to a Golden Fleece award. Reporters scrutinized the NSF lists of grants titles trying to find ones that could be called out as foolish expenditures of federal funds. One newspaper story I remember quite well involved an NSF grant with the title "A Quantitative Study of Necking Behavior." That story was picked up by almost every news service in the country. How could the National Science Foundation fund such ridiculous work. We scurried around trying to determine which program at NSF funded the

work. It turned out that it was funded in the engineering division and the project involved metal-necking processes. The newspaper reporter had not bothered to go beyond the title for his story.

One Golden Fleece was for research on language behavior in chimpanzees. Proxmire did go off the deep end on that project, arguing that it was ludicrous for NSF to investigate language behavior in chimpanzees. Once Proxmire understood the project--once several other Senators understood the project in detail--it proved to be a turning point. These Senators along with Senator Proxmire recognized the value of the work once the project had been carefully explained to them.

Another Golden Fleece involved a study entitled "Social and Sexual Behavior of Screw-worm Flies." That study was funded about 1970. The study is still sometimes mentioned in news accounts as an example of waste of federal dollars. For example about three years ago the Chicago Tribune cited the study once again; they must have a file from which they retrieve these items. In fact, the study proved to be remarkably important. In 1980 there was a Congressional Symposium under the sponsorship of Senator Proxmire. It reviewed the research done on the social and sexual behavior of the screw-worm fly. As you may know the screw-worm fly lays its egg under the skin of cattle entering through wounds in the skin. The eggs hatch and the larvae harass the host animal consuming flesh. As a result of the NSF sponsored studies, techniques were developed to induce sterile males to mate with females thereby controlling the fertility of screw-worm flies. In Texas, Mexico, and New Mexico fortunes have been saved using these methods for controlling the screw-worm fly. Governor Brown, of California, you might remember, had some problems with the med fly several years ago. The same control method was tried; unfortunately

male flies were released that were not properly sterilized. Rather they were potent males and it created political problems for Governor Brown; that may have been the key factor in Brown's loss in the race for the Senate.

The work NSF supported in the behavioral and social sciences was by-and-large outstanding. However, a number of psychologists were so anxious to gain attention and publicity that they put the Foundation in a precarious position by misrepresenting their work, making it look frivolous and of little value.

From 1975 to 1980 the budgets for the behavioral and social sciences at the National Science Foundation went up at a very steep rate. The Foundation was reorganized with new divisions for the behavioral and neurosciences and for the social sciences. Senior individuals were brought into the foundation to head up these divisions. Herbert Simon, the Nobel Prize winner, headed a commission on the state of the behavioral and social sciences. In my opinion, these sciences now are solidly established at the National Science Foundation and the changes that have been made will be enduring ones.

But I want to conclude these remarks about the Golden Fleece by stating that we cannot as a group depend on other scientific disciplines to defend us. We cannot depend on the physicist and the chemist to provide a defense when the Proxmire's are on our back. We have to provide that defense ourselves. We have to be savvy to what is going on in the Congress and we have to make the effort that's necessary to communicate with the Congress. Since there is a representative from the American Psychological Association here let me note that I don't believe APA does as an effective job in this regard. Certainly the American Physical Society, the American Chemical Society, and a number of other groups work very hard at getting support for their fields and if

psychologists expect budget support they are going to have to show the same effort and dedication.

Now let me talk about another event that occurred during my days at NSF. In 1958 with Sputnik, the nation realized among other things that it was in trouble in the area of science education. Accordingly the National Science Foundation was charged with developing a program in science education and it did. The program proved to be remarkably successful. Modern high school curricula in mathematics, physics and chemistry all came out of the National Science Foundation efforts in response to Sputnik. The approach was to intervene with the best scientists and educators and try to improve both the quality of instruction and curricula. Things went rather well until NSF became more daring and expanded its efforts to include the biological sciences and topics in evolution. NSF began to run into trouble with the Congress in its education programs when it ventured into biology but trouble that the foundation could live with.

In the late '60s NSF decided to make one further jump and develop a curriculum for the junior high school years--a curriculum that Professor Bruner played a key role in developing. Most of you know Jerry Bruner who was at Harvard University at the time. Bruner and a group working with him developed a junior high school curriculum called MACOS, an abbreviation for Man: A Course of Study. It was a course that focused on anthropology and issues of cultural diversity. Films developed for the course illustrated cultural differences by depicting a particular Eskimo group. One film, for example, illustrated what happens when a husband takes a long trip and his wife isn't well enough to go along; staying warm is a serious problem so he simply borrows someone else's wife. Another film involved elderly people; when they were no

longer able to take care of themselves they were placed on an ice float and left to die. Some of NSF's critics could tolerate the biology curriculum, but they could not tolerate MACOS. There was a well funded group operating throughout the nation focused on MACOS--rallies were held and the Congress was given a full dose of criticism for funding MACOS. I want to emphasize that MACOS is a fine curriculum and I am in no sense criticizing my colleagues for having developed the course. It's inherent in our field to confront pressure groups that are strong opponents to the behavioral sciences. On the other hand, we have to be prepared for much opposition and lay a political base to deal with it.

Now let me comment on recent events. When President Reagan was elected several things happened at the National Science Foundation. One was that the Science Education Directorate was abolished, a directorate that had fared well from its inception following Sputnik. That decision was very much affected by the groups that had organized in opposition to the biology curricula and the MACOS curriculum. In the last several months the National Science Foundation has re-established the Directorate of Science and Engineering Education. The Foundation is going to be once again in the education business. However, this time NSF will need to be more careful and establish a political base for its programs.

Another thing that happened during the President's first year in office involved dramatic cuts in the behavioral and social science budgets at the National Science Foundation--they were cut by about 50%. What was interesting from my perspective was the outcry that occurred in the Congress and across the country to such cuts. Mr. Stockman, when questioned about it said that it had been a mistake. But he also noted that although it was a mistake, it was the

kind of mistake he didn't mind making on occasion. That attitude was influenced by the events associated with the Golden Fleece and MACOS.

Now let me turn to my second topic, some general remarks about the introductory psychology course. Every year of my life since 1948 has involved introductory psychology in some way or other. As a teaching assistant, as a junior faculty member at Stanford and UCLA and as a senior faculty member at Stanford I taught introductory psychology and loved it. In 1964 Jack Hilgard asked me to be a co-author of his introductory text. I was a co-author of the 4th edition and on edition 5 my wife joined us; we are now at edition eight. It's been a wonderful experience--there isn't a day that goes by where something happens that I don't relate to a section of the textbook.

The introductory psychology course is a marvelous intellectual experience for young people. It is a course with real intellectual content and relevant to student's interests. I can think of no better vehicle for teaching students how to think about and analyze problems; introductory psychology is one of the best college courses in which to explain the scientific method. In physics, chemistry and biology one rarely talks about how one gets from one hypothesis to the next; it's usually a description of facts. In the introductory psychology course one can illustrate the scientific method in a very powerful way. It is an important course and needs to be taught well. It determines a student's perspective on psychology and the regard other members of the faculty, not in the psychology department, have for psychology.

I want to give you some numbers. I don't know if they are exactly correct, but they are close enough for purposes this evening. About half of our high school graduates go on to college. At least half, if not more, of all college students, take the introductory psychology course. Therefore about 25%

of all high school graduates are exposed to the introductory psychology course. Think about that percentage. There is no other college course that involves so many students. The course can be a significant influence if taught well, and of great value to society.

I will not give you my philosophy on how to teach the course. My views can be found in the prefaces to five editions of the textbook, to five editions of the student guide, and to five editions of the instructor's manual. But there are several points I'd like to make tonight. One is with regard to the style of the course. As in the case of the Golden Fleece, we can generate two different images of the introductory course. One is of a serious scholarly field and the other is of a frivolous overpopularized field involving fun and games. The course should be relevant, it should be highly interesting, and it should be meaningful. But one can achieve these objectives from a scholarly viewpoint far more effectively than from the other viewpoint. I am not opposed to showmanship in the classroom if it serves an instructional purpose, but object to faculty who use the course as a platform to satisfy their own ego.

Now for a few remarks about textbooks. Every psychologist should on occasion examine introductory textbooks in other fields. Look at introductory textbooks in physics, chemistry, biology or anthropology, and then look at a sampling of introductory psychology textbooks. In my judgement, many of the introductory textbooks in psychology are an embarrassment to the field. They look and read like People's Magazine or the National Enquirer. If we project that image often enough it will characterize the field.

One of the problems with introductory texts is that they are revised at a fast rate. When I got into this business the standard revision cycle was six or seven years. My textbook is now on a four-year cycle, many textbooks are on

a three-year cycle, and some are on a two-year cycle. I have mixed feelings about this matter. Psychology is a field that is changing rapidly and six years may be too long. The publisher's want a two- or three-year cycle so that they can eliminate the used book market; every time a new edition is published the used-book market goes to zero. From a scholarly viewpoint four years is not a bad cycle. When an introductory biology, physics or chemistry book is revised there is not that much to do; most of the material stands almost as it was in the preceding edition--improving the displays, improving certain discussions, but the basic material changes only gradually. In psychology change is the order of the day. Unfortunately rapid change creates too many textbooks that are not carefully thought through. I recommend that you sit down and carefully read an introductory psych book from the viewpoint of a student. As psychologists we know all the words and can rip through the materials; the words pop out and we ascribe all sorts of meanings that are often not there for the student. Even on a four-year revision cycle it is a difficult task to revise an introductory book so that the end result is truly meaningful for a student reader.

Now let me go to my third and last topic this evening, undergraduate education in psychology. The undergraduate program in psychology is a superb contribution to undergraduate education. For pre-law, pre-med, or in preparation for an MBA, there is no better major than psychology. For fields like engineering, journalism, and a host of others the more psychology, the better off the student will be. Psychology courses are of great value both from the viewpoint of a liberal education and for many professional programs. But the psychology curricula that have evolved in the United States are tremendously diverse. Twenty years ago we didn't have the diversity from one university to another that we have today. It's as though 20 years ago

departments went off on independent paths and generated hundreds of different approaches. I am in favor of diversity, but we should be aware of the nature of that diversity.

I want to make a proposal to you, one that I would like you to think about. The proposal is that we establish a National Commission on Undergraduate Education in Psychology composed of distinguished educators, psychologists, and other scientists. I would hope that the commission would examine and document the range of courses, the range of curricula that exist in psychology programs across the United States. Some international comparisons of undergraduate education would be extremely interesting. I'd like to see the commission address itself to how the French, the British, the Germans, and other countries teach undergraduate psychology. I'd like some discussion by this commission about core concepts for a psychology major. I'd like some analysis of advantages and disadvantages to the various schemes now in place for organizing the psychology curriculum. I'd like some information about psychology students--what courses they take outside their major, what sorts of careers they choose after college, etc. I would like some discussion about how to coordinate psychology with other fields of study, particularly the types of service courses we should be offering. Students are job oriented these days and there should be some discussion about psychology courses as they relate to the marketability of the students and the changing makeup of the student body.

Attention to undergraduate education in psychology at this point in history could be very important. It is a good time to call for such a study and this Conference can be the base for mobilizing support and communicating the idea to the Board of Directors of the APA. In this regard I want to take note of certain educational trends. 1983 is the peak year for the college age

population and thereafter it will experience a steady decline. That decline will be 22% for the national average over the next 10 years; the following 10 years will be virtually constant. So for the next 20 years we are going to see a sizeable decline in the undergraduate college population. These years will be difficult for higher education and it will be particularly important for people teaching undergraduate psychology to be aware of student interests and to ensuring that we have a set of courses, an attitude, and an approach to the teaching of psychology that makes it a valuable and exciting intellectual experience. I want to go back and remind you of one point. About 50% of the high school graduates go to college and 50% of those students take introductory psychology. We have a large number of people in the United States who are exposed to the field under rather ideal conditions. We should teach the course in such a way that they leave school with a high regard for the field and what it has to offer.